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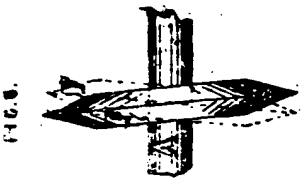

FIG. 5.

FIG. 6.

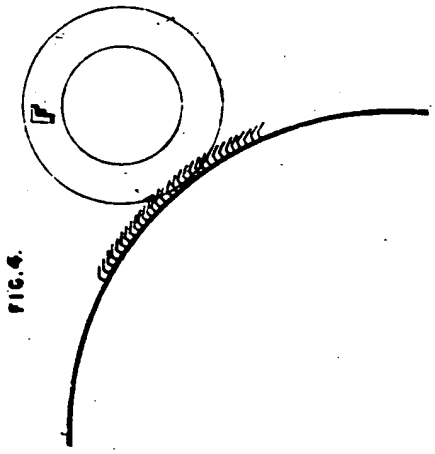

FIG. 4.

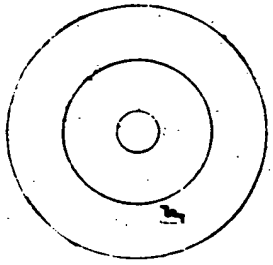

FIG. 2.

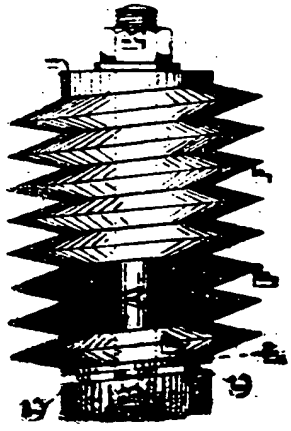

FIG. 1.

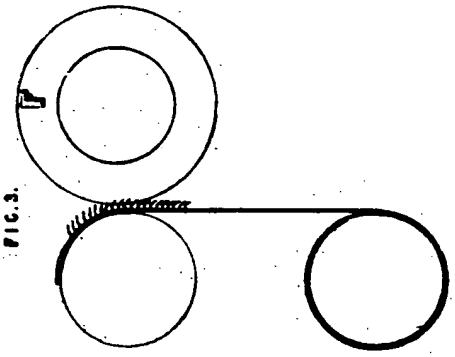

FIG. 3.

Card Grinding

A.D. 1882, 11*th* SEPTEMBER. N° 4320.

Rollers Employed for Pointing, Grinding, and Sharpening Cards.

LETTERS PATENT to John Sykes of the Firm of Messieurs Joseph Sykes Brothers of Lindley near Huddersfield in the County of York Card Manufacturer for an Invention of IMPROVEMENTS IN ROLLERS EMPLOYED FOR POINTING GRINDING AND SHARPENING CARDS.

PROVISIONAL SPECIFICATION left by the said John Sykes at the Office of the Commissioners of Patents on the 11th September 1882.

JOHN SYKES, of the firm of Messieurs Joseph Sykes Brothers, of Lindley near Huddersfield, in the County of York, Card Manufacturer, "IMPROVEMENTS IN ROLLERS EMPLOYED FOR POINTING, GRINDING, AND SHARPENING CARDS."

This invention relates to an improved roller for grinding pointing and sharpening cards, the roller consisting of angled and oblique rotating edges or surfaces.

The roller as above consists of discs angled at their outer edge and composed of solid emery, or the discs may be made by coating metal or other substance with emery—the discs are secured in an oblique position on their shaft or axis by means of screw or other like adjustment, or by means of taper washers or taper discs introduced at the end or between two or more of the said discs. Or the roller may consist of solid emery having V or angular oblique recesses, and angular or Λ projections cut moulded or otherwise formed therein and thereon so as that when rotation is imparted to the said roller, its discs or angular projecting edges of the discs have likewise a to-and-fro motion.

In addition to the motion obtained by reason of the oblique position of the discs or angular projections the roller may have imparted thereto a lateral to-and-fro or traversing motion.

[*Price* 6*d*.]

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said John Sykes in the Great Seal Patent Office on the 9th March 1883.

JOHN SYKES of the firm of Messeiurs Joseph Sykes Brothers of Lindley near Huddersfield in the County of York, Card Manufacturer "IMPROVEMENTS IN ROLLERS EMPLOYED FOR POINTING GRINDING AND SHARPENING CARDS"

This invention relates to an improved roller for grinding pointing and sharpening cards, the roller consisting of angled and oblique rotating edges or surfaces.

The roller as above consists of discs bevelled or angled at their outer edge and composed of solid emery or the discs may be made by coating metal or other substance with emery the discs are secured in an oblique or angular position on their shaft or axis by means of screw or other like adjustment or by means of taper washers or taper discs introduced at the end or between two or more of the said discs. Or the roller may consist of solid emery having oblique angular recesses and oblique angular or Λ projections cut, moulded or otherwise formed therein and thereon so as that when rotation is imparted to the said roller, its oblique discs or oblique angular projecting edges of the discs have likewise a to and fro or lateral reciprocating motion.

Such being the nature and object of this my said invention I will now proceed to describe the same in detail and in order that the invention may be fully understood I have hereunto annexed a sheet of drawings illustrative thereof and have marked the same with figures of reference, the same letter referring to the same part in the several views or figures.

DESCRIPTION OF THE DRAWINGS.

Fig: 1 is an elevation partly in section of my improved roller.

Fig: 2 is an end elevation of same.

Fig: 3 is end elevation shewing application to card clothing in strips.

Fig: 4 is end elevation shewing application of my improved roller to the grinding of cards on a card cylinder or cards mounted and in use or ready for use.

Fig: 5 is detail of emery disc

Fig: 6 is elevation of emery disc shewing by dotted lines the change of position of the disc at each revolution.

A is a central shaft to which is secured the boss B having adjusting screws C. E is a plate which by means of the screws C is set to an angle and thereby determines the angle of the emery discs F—J. is a taper holding collar, K is the nut which by means of the shaft A binds and securely holds the whole in position.

It will be seen that the discs F being set obliquely, or at an angle to the shaft A rotation will give to the circumference of the several discs at their point of contact with the cards the reciprocating or to and fro motion so that each disc will act upon and grind both sides back and point of each card tooth within the compass of its lateral motion thus effecting the grinding of the teeth by the to and fro lateral reciprocating motion as distinguished from other rollers or discs in which the angles or peripheries are at right angles to the axis around which they rotate or of emery discs at fixed distances in unison with or equal to the spaces or furrows between the several lines of card teeth.

It will be understood that the invention above described is specially applicable to the grinding of cards in use or after the same are "mounted" as and when requisite.

Having thus fully described the nature and particulars of this my said invention together with the manner in which the same is to be or may be performed or carried into practical effect I would have it understood that I lay no claim *per se* to the emery disc nor to an emery roller having angular grooves formed therein as such is not new what I do claim is.

Firstly—The improved roller comprising the angular emery discs constructed arranged and working or rotating obliquely to their axis in manner and for purpose herein described.

Secondly—The improved roller having the angular oblique recesses and ∧ projections in manner and for purpose herein described and as illustrated by drawings.

In Witness whereof I the said John Sykes have hereunto set my hand and seal this twenty fifth day of January in the year of our Lord one thousand eight hundred and eighty three.

JOHN SYKES. (L.S.)

LONDON: Printed by GEORGE E. B. EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

1883.